NMRA NCR Division 2

Volume 4 Number 1 Winter 2018

Division 2 Newsletter

Traverse City Yard Event SATURDAY, January 20, 2018 1 - 4 PM

PENINSULA TOWNSHIP FIRE STATION #2 8150 CENTER RD, TRAVERSE CITY, MI, 49686

The first Traverse City yard meeting of 2018 is scheduled for Saturday, January 20th, 1 pm at Peninsula Township Fire Station #2. A reminder to bring something for show and tell. It's always great to see what members are working on for their layouts. Scott Pandorf will also continue his clinic on DCC decoder installation. He has details below.

The Traverse City yard meeting scheduled for March will be held at 1 pm on the 24th, back at Fire Station #2. It will be spring, we hope, so probably time for a tune-up. We will be looking at rolling stock and locomotives and how to fix problems to make them run better. More info to come later.

Here's hoping that Santa fills your stocking with things needed for your layout. If you do end up with coal, I hope it's for those empty hoppers!

Have a great holiday!

Mike Cipko

Petoskey Yard Meeting Saturday, February 10, 2017 1:00 - 4:00 PM

Show and Tell Clinic: Car and Locomotive Tune-up



Crew Call:

- 1/20/2018—Traverse City Yard Meeting
- 2/10/2018—Petoskey Yard Meeting
- 3/24/2018—Traverse City Yard Meeting
- 4/21/2018—Petoskey Yard Meeting
- 8/5/2018—NMRA National—Kansas City, MO
- 10/11/2018—NCR Convention—Lansing, MI

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.Greetings and Happy Holidays to you all. When we started this Division it was decided that December was a very busy month so we would not have a Yard event. So do look forward and be ready for the January event in TC. There is a detailed article about what you need to bring so you can have a decoder installed and running by the end of the clinic. You will also have learned how to go home and install more for your layout.

Some of us go to swap meets and find new treasures and sell off items no longer wanted or needed. We have had a 'swap meet' table a couple times in the past but would like to make it a regular table along with the 'show and tell' table and 'AP' table. So, bring any and all train related items to our next Yard event and turn some of that "stuff" into some cash to buy a new engine and decoder. Don't forget the 'show and tell' table and the 'AP' table also.

Christmas time and trains under the trees are coming. I hope Santa leaves you all a box for your layout. I look forward to seeing you all in January installing decoders.



Layout Sound Mike Cipko

Nowadays we expect to hear engines, horns, and bells from our locomotives, but what about other sounds on our layouts? We've seen and heard stock cars with cattle, and even thunderstorms. What about the rest of the layout? Is your mine operating, or your sawmill? Can you hear passengers at your station or the waterfall as you pass by? How about the crew at the engine house? Can you hear the waves splashing against the shore, seagulls flying overhead, dockhands moving cargo in your harbor? You can do many of these, and more!

What do you need? Let's start with a sound track to play. They can be purchased from various sources or you can make your own. I have used a free software program called Audacity which is a multi-track audio editor and recorder which allows you to "process" sounds just like you create a document in a word processing program. Many sound effects and files are available free online. Download them into different tracks in Audacity then you can move them around in a timeline that you develop. Copy, paste, delete, adjust the pitch, change the speed.

Imagine a main street in a small town. Think of all the sounds. Do you hear the cars and trucks passing by? Vehicles starting and stopping, pedestrians walking and talking, the ice cream man with kids flocking around and don't forget

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Layout Sound

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the barking dogs! I hear the wind and the leaves rustling, maybe it's started to rain. Hear the airplane flying overhead, I wonder where it's headed. The barbershop has its door open. Clip, clip, clip. He's also got the local radio station on! Combine these sounds and you've got a custom soundtrack.

Would you rather acquire a CD with scale sound? There is a great selection of Scale Magic's CD Soundtracks from Fantasonics They have readymade scenes on over 50 CD's that portray urban, industrial, or rural settings. Mining, Logging, refinery operations, sawmills, ranching, streams and waterfalls, big cities and small towns are just a few that are available.

Now we need a way to play the soundtrack that we have. How about a stereo system or a boom box? They could work if you want widespread sounds, such as sounds for a mountain or prairie layout. We are looking for something more localized. Most of our sounds come from a point source. Loco sounds come from the locomotive, sawmill sounds from the sawmill, waterfall sounds from the waterfall, etc.

Something that I've become familiar with is the seven-foot rule. We've compressed our layouts so significantly that if we are seven feet away from something we are probably in the next town, county, or state! Consequently, the point sounds that we hear should only be heard from a short distance away.

Pricom Design has a line of "Dream Players" that are audio playback devices that can be triggered by push buttons, motion detectors or other

methods, and they have outputs that can control lights and motors. Everything is stored on a removable Mini SD card. The DP-LITE can play multiple tracks and is only 2" x 2.5" x .5" so it can fit most anywhere. The DP-PRO has expanded capabilities. It can randomly play four separate sound tracks with up to eight randomly chosen files per track. This means that 32 files can be played on a random basis. No worries about sounds becoming monotonous because they are played repeatedly in the same order. These units can be connected to a small set of powered computer speakers which would bring the scene to life.

Try it! Let your imagination run wild. You'll be amazed with what you can come up with. You <u>can</u> make it work. The cost will probably be reasonable too! The Pricom systems are about the price of a decoder. One of the best sources of how-to information is the Layout Sound blog at groups.yahoo.com Additional information can be obtained from <u>Audacity</u>, <u>Fantasonics</u> and <u>Pricom</u> I know that there are other suppliers and sources out there, but these are ones that I am familiar with.



A "Short" Story of the Tortoise and the Turnout by Bill Horning

The Tortoise slow motion switch machine by Circuitron is a very sturdily built and reliable motor for controlling turnouts, power routing a turnout frog, displaying turnout status, and other applications. On my Rio Grande Midland Railroad I use them to power all of the turnouts which are primarily Walthers and Shinohara code 83. I power the frogs on both the older style non "DCC friendly" and the newer style turnouts. These turnout motors have been in use on my railroad for several years with no major failures. Even Tortoise machines bought used seem to last for a lifetime.

The only problem I have encountered that has repeated itself on a few occasions is with a combination of the Tortoise machine paired with an older style Walthers/Shinohara non "DCC friendly" turnout. This combination sometimes results in a momentary electrical short when throwing the turnout one way or the other. As the turnout points are in motion the Tortoise's internal circuitry makes electrical contact with the destination route before the turnout breaks contact with the original route. This is only a very brief short but it's enough to disrupt the normal flow of an operating session especially with sound equipped locomotives.

There are a few options to solving this problem. Realigning the Tortoise position with the points may help but I have found that's a rather meticulous adjustment to make. A second option is to remove the metal contact wipers under the switch point throw bar that Walthers/Shinohara turnouts use to rout track power to the appropriate rails. Since I already have powered the frog using the Tortoise auxiliary contacts these strips are not needed. I take a hobby knife to lift the contact and use a pair of tweezers to grab one end of the contact, twist it back and forth horizontally a few times until it breaks in two and remove both parts.

If neither of these actions fix the shorting problem the next option is to alter the Tortoise itself. The tortoise has two sets of auxiliary input/ output, pins 2, 3, 4, and 5, 6, 7, that may be used to route power to the frog. Powering the turnout frog uses a set of three wires one each to the left rail power, right rail power, and frog. Inside the Tortoise there is a set of wipers that as the Tortoise operates move across contact strips with a gap between the left rail and right rail power sources. If the Tortoise makes contact with one rail before electrical contact is broken with the other rail widening that gap should solve the problem. Thank you to Ernie Barry for telling me of that solution which has made both of our layouts run more smoothly.

In order to widen the gap the Tortoise must be taken apart which of course voids the manufacturer's warranty. These switch motors are so robust that I have had only one failure which was on a

Tortoise bought used but was easily reparable by replacing the gear sets which the helpful people at Circuitron sent as a replacement. Follow these instructions to widen the gap. The (Continued on page 5)



only tools needed are a Phillips screw driver and a sharp hobby knife.

There are five screws that hold the plastic

case together, one in each corner and one in the center as shown in Picture 1. Remove the five screws, cut or remove the circular sticker on the side, then with the Tortoise label face down carefully lift off one half of the case. If the small gears fall out don't panic, they are all the same and can only fit in there one way so carefully put them back in place as shown in Picture 2.



Take out the horizontal drive shaft and set it aside then remove the circuit board with the motor attached. Lay the circuit board with the motor side down and you will see the the motor has been used a number of times you will also see

an etching of the trace that the wipers follow as they move across those contacts as in Picture 3. Two pairs of those contacts have a gap which correspond to pins 2, 3 and 6, 7. Since I'm not always sure which of the two gapped contacts are being used for my frog power I take a sharp hobby knife to cut and remove some of the contact on each side of the gap on both pairs being

(Continued from page 4) careful not to cut through the trace leading to the contact. Also be careful not to widen the gap too much or the wipers may not make proper electrical contact once the Tortoise is reassembled. Removing at most one sixteenth of an inch on each side should do. When you

> are done the circuit board should resemble Picture 4. Compare Pictures



3 and 4 to see the difference.

Reassemble the tortoise by placing the circuit board back in the case. Insert the drive shaft through the circuit board so it engages the Tortoise throw arm. Check all of the small gears to be sure they are properly seated, place the other half of the cover on tightly, and install the five screws.

That's it, the problem should be solved so install

the Tortoise back on the layout. There's only one four sets of contacts. If Tortoise I modified where this didn't solve the shorting problem. Taking that one apart a second time I found the wiper arms were not properly aligned with the contacts on the circuit board so bending them slightly fixed that one too.



End of "short" story, now back to running trains.

Preparing for the DCC Decoder Install Clinic in January

I am repeating this information in advance of our hands on clinic on the 20th of January. Please come prepared with a locomotive and a decoder to install. See the list at the end of this article!

If you have questions on a specific locomotive you want to install please feel free to email me at <u>spandorf55@gmail.com</u> with your question and I will do my best to provide direction. For the session in January I will bring a selection of warm-white and cool-white T1 LED's (and resistors) that you can buy from me. I will also have a few poly-fuse SMD's for high amperage motor installs.

See you in January.

To help you prepare for that session, I would like to cover some decisions you should make and material you should acquire before you install.

These decisions are as follows:

- 1. Locomotive manufacturer and locomotive type.
- 2. Is this a sound or non-sound installation?
- 3. Will this locomotive be consisted with other locomotives?
- Are you going to keep incandescent bulbs or switch to LED's?
- 5. Which Decoder manufacturer?

1. Locomotive manufacturer and locomotive type.

You need to know this so you can choose the connection type or style of the decoder you purchase. For instance, if your locomotive is an Athearn 'Blue-box' style (or early Proto 2000) you

probably want a direct wire decoder **1**. If you have an Atlas 'Yellow box' locomotive (SD-24, GP38, GP40, FP7) you want a direct wire decoder as well. If you have an Atlas 'Yellow box' locomotive manufactured by Kato (RS1, RS3, RS11, RSD4/5, RSD12) you want an 'Atlas form factor' decoder 2. If you have a first generation DCC compatible locomotive you can use an 'NMRA' 8 -pin connector 6. If you have a second generation DCC compatible locomotive you can use an 'NMRA' 8-pin connector or a 9-pin JST style connector 4 (Athearn RTR 'Blue/Yellow' box locomotives). Finally, some more recent manufacturer locomotives (recent Intermountain, Bowser, Bachmann EM-1 and others) have been using a European style 21-pin connector 6. Un-



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Preparing for a DCC Decoder Install (continued)

(Continued from page 6)

fortunately, when manufacturers changed from one style to another is not 'cut-and-dried' so you will have to open the locomotive and check before you order.

Also note that for certain specific locomotive models there are specific decoders made so they 'drop-in' to the model (NCE non-sound for Atlas S2/S4; SoundTraxx sound for Intermountain FP7 are examples).

Wiring a brass steam locomotive is another matter entirely, although you will likely be using a direct wire decoder. Wiring a plastic steam locomotive is going to depend on the age of the locomotive and manufacturer.

Another concern (particularly with Athearn 'Bluebox'; Proto-2000 'Tan-box'; Model Power (E7, E8, FA2, RF16); Atlas 'Yellow-box' (SD24, GP38, GP40, FP7), older brass steam with 'open frame' motors is the amperage draw of the motor. Many of these locomotives (particularly Athearn 'Bluebox') draw more than 1 amp. Most decoders will support 1-amp peak. The micro style usually maxes out at .8-amp peak. In these cases, you can either replace the motor or use a poly-fuse.

The locomotive will also determine the form factor of the decoder ('Atlas', standard or micro).

Finally, in a sound installation, the locomotive will determine the size of the speaker you use. Generally, you want to use the largest speaker you can fit in the locomotive. The new 'sugar-cube' speakers are better than most smaller standard speakers (say thank you to smart phones for those speakers).

In almost every case an enclosure for the speaker will improve the sound quality and lower range 'rumble'.

2. Is this a sound or non-sound installation?

For a non-sound installation, you just need to decide the form factor for the decoder and how you are going to connect (direct wire, 8-pin, 9-pin, 21pin) and what you are doing with the lighting.

For a sound installation, you must choose the form factor for the decoder, but also decide what speaker you can fit and whether you are going to include a current keeper or not (current keepers help with momentary power drops to keep the sound from resetting). All of this means that you are trying to cram a lot into a sound equipped locomotive between decoder, speaker, current keeper and wiring.

3. Will this locomotive be consisted with other locomotives?

Generally, it is much easier to consist locomotives from the same manufacturer (both locomotives and the decoders). New decoders have more flexibility than older decoders. In my experience, even the same locomotive from the same manufacturer (but different production batches) will behave very differently when trying to speed match.

Generally, the best path to follow is to use the same manufacturer for sound and non-sound decoders that are to be (or may be) consisted.

4. Are you going to keep incandescent bulbs or switch to LED's?

Again, there is a lot of variability here. For instance, if you are going to continue to use bulbs

Preparing for a DCC Decoder Install (continued)

(Continued from page 7)

(Athearn RTR or Genesis) and are plugging into the 8-pin or 9-pin connector you probably don't need to worry about resistors for the bulbs (don't come looking for me if you blow a bulb). If you are installing into an Athearn 'blue-box' or Proto 2000 'tan-box' or numerous older locomotives that use a 12-volt bulb you should absolutely replace the bulb. This is because those bulbs have a high 'in-rush' current which will blow the circuit on the board (you can add a resistor to protect the board but why not replace this high-failure item with an LED?)

5. Which Decoder Manufacturer?

I will tell you that any of the decoders from the various manufacturers will generally work and if you have experience or a reason to use one over the other go for it!

However, I have had better experiences with some manufacturers over others.

TCS – I do not have any direct experience with the newer TCS WOW sound decoders but have heard very positive comments about sound quality (but fewer positive comments about programming complexity). For years I used TCS non-sound decoders and have found them to be robust and easy to use.

NCE – Their non-sound decoders are easy to use and robust.

ESU / LOKSOUND – Excellent motor control and great sound quality. They make both sound and non-sound decoders and are now standard from the factory for Intermountain, Bowser and Atlas. Sound files are programmable and can be modified and reloaded.

SoundTraxx – Is the standard from the factory for Athearn (Genesis and sound RTR). Tsunami and now Tsunami-2 and Economi. The newer Tsunami -2's offer multiple horns / bells / engines which makes it easier to select a decoder. I will install a non-sound SoundTraxx decoder when the locomotive will be paired with a Tsunami sound equipped locomotive. Good functionality and good sound but the sound file is fixed and can't be changed. The Bachmann 'Sound-Value' decoders are also OEM'd from SoundTraxx (and so are compatible if less flexible). For a time, Bowser was also using SoundTraxx sound decoders.

MRC / Digitrax / Lenz – I have installed these in the past but have generally had poor results. MRC's are inexpensive but suffer high failure rates (Athearn Genesis originally used MRC which they abandoned for SoundTraxx – 'nuff said).

QSI – Great sound decoders but (the company) has fallen on hard times and support has become more difficult. I have several Atlas factory sound equipped locomotives with QSI decoders that I love the sound and motor control, but it's a sign that Atlas is now using LokSound.

Bring your locomotive, decoder, speaker (if called for) LED's, wire, solder, your soldering iron/pencil, heat shrink tubing, clamp or tweezers. We will have additional items there, but you will get better experience if you are using your own equipment.



See you there, Trainmaster Scott

October 2017 Petoskey Yard Meeting



Group during Show and Tell Presentations

David Zolnierek presenting Show and Tell \

November 2017 Traverse City Yard Meeting





AP Corner Pete Magoun, MMR

Happy New Year, All!

With the short days, cold temperatures and white gifts from above arriving in quantity, it's a great time to haul up to the bench and get Back in Training! That's the two-rail kind.... So let's continue the journey through the AP Categories (<u>https://www.nmra.org/categories</u>) and encourage you to make progress! Remember, this pits you against you, so *You* win no matter what!

Let's discuss the "Settings" category. There are three certificates available in this category: Structures, Scenery and Prototype Modeler. This category, as I have mentioned, is where you unleash your inner five year-old and get messy. Well... not entirely, as "Structures" is in here, and that's pretty precise, so let's address that one first. It's also the first one listed on the AP Category list for "Settings" listed on the NMRA website, so that makes it easy.

The **Structures** certificate requires a dozen scale models of structures. Six different types are required, one of which has to be a bridge or a trestle. Six must be scratch built, and six must earn Merit Awards. All have to be super-detailed, using either scratch built (extra points) or commercial details. Things like light bulbs, decals, LEDs and such are exempt, although you can earn extra points by rolling your own, so to speak. If you're thinking about this certificate, it will take time, so be prepared!

Again, read the "fine print" on the website—it has hints and tips on what works and what doesn't. The idea is to prove to yourself and others that you can build different types of structures. A wood frame station in New England is probably not markedly different from a wood frame station in Michigan or California, but there are significant differences in wood frame, brick, and stone struc-

tures, for instance. Same concept goes for a wood water tank and a riveted or welded steel one. Give them a shot! You might learn stuff, and even have fun!

Next up is Scenery. Yep, you can get messy on this one, but please pause first and read the requirements-they're Scale-Specific! Most of us work in HO, so I'll use that for the example. You need 32 square feet of scenery for the certificate. This needs to combine terrain, structures, background, lighting and conformity/realism into something that screams "scene!" The official term used for this is "realistic effect." Make it real! Garden railway types can use their railways for this certificate, but again, there are requirements to "make it real," don't just run tracks through the flowerbeds. This certificate, overall, is one of the more "subjective" ones, as there is no judging matrix on which to depend, but you can use the same factors in your preparations for evaluation.

There is also no requirement for the 32sf to be on your layout— modules work well, and even part of someone else's railroad or a club layout can work, provided that the modeling shown is unequivocally yours alone.

Note in your initial reading that there are point scores for terrain, structures, background, etc., and although they do not refer to construction of a structure (that's a different certificate), they all play a part in creating the overall effect.

And you're going to need some photographs to document what you've done. Note that these are not required to be professional photographs—the "what I did on my vacation" snapshot variety is fine, but they do have to document the scenery work.

Before I run out of space, let's discuss **Prototype Models**. This one requires six examples of proto-

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type equipment or structures. No minimum size here, and no requirement for things to operate. In other words, a diorama will serve nicely, if necessary. You need four different types of models, though: rolling stock, railroad structure, caboose or passenger car, and motive power. Here, too, Terrain, Background, Structures, Lighting and Paaliem are the categories to be judged

ing and Realism are the categories to be judged, and here, too, there is no matrix *per s*e for doing so. Use the same process you did for Scenery. Make the scene look good enough for a knowledgeable observer to say "Hey! I know where that is!" and you'll probably be fine.

As with most of the AP certificates, the website instructions contain a lot of helpful information to get you moving in the right direction. And speaking of getting moving, Scott is telling me

I'm about out of space, so we'll deal with the **Engineering and Operation** category next time. But first, Congratulations to Scott Pandorf, whose **Chief Dispatcher** paperwork I sent to the region in November. Bravo! High Green!



Division Attendance November 2017 TC Yard Meeting

The following Division 2 Members Attended the November TC Yard Meeting: Baerman, Neil Capron, David - mmr Carver, Doug Cipko, Mike Cole, John Crandall, Charles Crocker, Robert Ensfield, Craig Graczyk, Jim Hensel, Jens Horning, Bill Kurbel, Jim Landis, Dave Magoun, Pete - mmr Maheney, Rich (Guest—Clinician) McDougall, Michael McDowell, Richard Neale, Bill - mmr (Guest-Clinician) Pandorf, Scott Skoglund, Terry Zolnierek, David

BRING YOUR SHOW AND TELL TO YOUR YARD MEETING!! WE WILL SHOW AND DISCUSS WHATEVER YOU BRING.

Pike Ads: Support your division by advertising your layout or business here!



Other Selected Events:

3/11/2018Mid Michigan Model Train Show4/7/2018Grand River Valley Spring Train Show

Mt. Pleasant, MI Wyoming, MI

Division 2 Leadership

Superintendent Assistant Superintendent Chief Clerk Paymaster Yardmaster—Petoskey Yardmaster—Traverse City Trainmaster Dave Capron John Cole Bob Crocker Jim Kurbel Dave Comer Mike Cipko Scott Pandorf dcgInrr@gmail.com modelman53@charter.net rc6sb@charter.net jbkurbel@gmail.com beechcomer@aol.com mcipko@charter.net spandorf55@gmail.com